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ABSTRACT

Toward the goal of impact specification, a cross-sectional survey of student values obtained responses to a four-page questionnaire from the sample of 696 students in 30 randomly selected classes on the San Jose State University campus during the last week of March 1973. The survey was designed to develop indicators of predispositional, psychological, and social factors as components of the college impact model for a longitudinal study of the San Jose University class of 1977. Special attention was paid the frequently neglected social factors; these measures included residence, work status, political awareness, intensity of political activity, and first media choice for political commentary. Criterion variables in the pilot study were 8-item political and religious attitude scales. The major thrust of the analysis toward the identification of relative contributions made by predispositional, psychological, and social factors to the prediction of political and religious attitudes in each of the four college years. Since the survey was cross-sectional, no inferences about change can be drawn from the data, but some conclusions about the impact of college and other environmental factors on differences in students are defensible without longitudinal data. (Author)

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COLLEGE AS A COMMUNICATION SYSTEM

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by

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COLLEGE AS A COMMUNICATION SYSTEM

In their comprehensive review of the more than 1,500 studies on college student attitudes done between 1920 and 1967, Feldman and Newcomb present the following general proposition:

> "Whatever the characteristics of an individual that selectively propel him toward particular educational settings--going to college, selecting a particular one, choosing a certain academic major, acquiring membership in a particular group of peers--those same characteristics are apt to be reinforced and extended by the experiences incurred in those selected settings. . .processes of attracting and selecting students are interdependent with processes of impact." (pp. 333,334)

This, of course, does not deny the impact of a college education, but does force a shift in attention from the identification of freshman-to-senior changes to the conditions under which certain types of impact are most likely to occur.

Toward the goal of impact specification, a cross-sectional survey of student values obtained responses to a four-page questionnaire from a representative sample of 696 students in 30 randomly selected classes on the SJSU campus during the last week of March, 1973. The survey was designed to develop indicators of predispositional, psychological and social factors as components of the college impact model for a longitudinal study of the SJSU Class of 1977.

Special attention was paid the frequently neglected social factors; these measures included residence, work status, political awareness, intensity of political activity, and first media choice for political commentary. Criterion variables in the pilot study were eight-item political and religious attitude scales.

Data from the survey were analyzed in the normal sequence of marginals, crosstabulations, and between-group mean scale comparisons. The major thrust of the analysis, however, was directed toward the identification of relative contributions made by predispositional, psychological and social factors to the prediction of political and religious attitudes in each of the four college years. Since the survey was cross-sectional, no inferences about change can be drawn from the data, but some conclusions about the impact of college and other environmental factors on differences in student attitudes are defensible without longitudinal data.

Results

Students who scored highest on the political value scale (i.e., were most liberal in their political outlook):

- lived in rented apartments or houses;
- intended to pursue the Ph.D. or some professional degree;
- were either social sciences or arts/humanities majors, in that order;
- looked to KQED, Ramparts, Sedition, or the Barb for political commentary;
- reported frequent discussion and information-seeking about politics;
- and identified themselves as very liberal or liberal in their general political feelings.

Students who scored highest on the religious values scale (i.e., were the least traditional in their religious outlook):

- were among the older students, upper classmen;
- intended to pursue the Ph.D. or some professional degree;
- regarded themselves as very liberal or liberal in politics;
- and looked to KQED, Ramparts, Sedition or the Barb for political commentary.

Significant associations obtained in crosstabulation identified a solid predictor set of nine variables that were placed in regression equations as a

preliminary attempt at data reduction. The most important predictors for each criterion attitude scale were selected for maximum variance with the least number of variables. A constant predictor set for each of the college years was not expected; instead, the analysis anticipated differences in the relative importance of predictor variables as students were matriculated through the college experience.

Only one variable--political self-identification--appeared in every regression equation. Four variables explained nearly as much variance as nine in political attitudes; three variables were almost as good as nine for the religious scale. All linear regressions were significant. Since many communication variables referred to political activity rather than religious involvement, the amount of variance predictable in political attitudes was understandably greater than the variability explained in religious attitudes.

Discussion

The regression analyses contain evidence that argues for declining impact of the college experience per se (as defined by choice of major) and increasing impact of other environmental influences in predicting political and religious attitudes. The prediction of religious attitudes finds no evidence of college impact. Only during the freshman year does the college major have sizeable predictive capability; the choice of major appears again in the predictor set at the junior year (perhaps because San Jose State is a commuter school whose population is more than 70 per cent transfer students), but its importance is greatly reduced. The major correlates of political and religious attitudes in the college experience fall loosely under the labels of self-image, reference groups, and information-seeking behavior.

The question of variable order naturally arises here. If we find patterns of variable associations for different types of individuals, we might ask which variables are the primary stimuli for pattern development. Unfortunately, a cross-sectional

TABLE I

MOST EFFICIENT PREDICTOR SETS FOR POLITICAL ATTITUDES IN EACH COLLEGE YEAR*

YEAR	PREDICTORS	REGRESSION COEFFICIENTS	BETA COEFFICIENTS	F	MULT r	VARIANCE EXPLAINED
Freshman	Choice of major	3.07	.22			
	Political awareness	0.99	.22	3.87[a]	.44	.20
N=68	Degree aspiration	-1.96	-.21			
	Self-identification	0.62	.10			
	(constant)	18.34				
Sophomore	Media choice	2.56	.27			
N-47	Self-identification	1.08	.17	3.30[a]	.49	.24
	Political awareness	0.78	.16			
	Political activity	0.76	.14			
	(constant)	14.04				
Junior	Self-identification	2.59	.44			
	Residence	3.78	.24	19.20[c]	.61	.37
N-138	Media choice	1.58	.16			
	Choice of major	2.17	.14			
	(constant)	6.14				
Senior	Self-identification	3.43	.50			
	Residence	0.90	.19	39.71[c]	.64	.41
N-235	Political activity	3.17	.17			
	Media choice	1.38	.14			
	(constant)	4.42				

*Students without complete data were deleted from the analysis

P values: a = .05, b = .01, c = .001

TABLE II

MOST EFFICIENT PREDICTOR SETS FOR RELIGIOUS ATTITUDES IN EACH COLLEGE YEAR*

YEAR	PREDICTORS	REGRESSION COEFFICIENTS	BETA COEFFICIENTS	F	MULT r	VARIANCE EXPLAINED
Freshman	Self-identification	2.69	.32			
N-68	Major influence	5.29	.26	4.52[b]	.42	.17
	Political awareness	-0.70	-.11			
	(constant)	13.70				
Sophomore	Self-identification	2.94	.34			
N=47	Media choice	3.33	.26	4.08[a]	.47	.22
	Major influence	-3.85	-.18			
	(constant)	18.17				
Junior	Self-identification	1.42	.17			
N-138	Media choice	1.44	.11	2.94[a]	.25	.06
	Political awareness	0.48	.08			
	(constant)	17.50				
Senior	Media choice	2.27	.19			
	Self-identification	1.55	.19	8.75[c]	.32	.10
	Major influence	2.06	.11			
	(constant)	17.31				

*Students without complete data were deleted from the analysis

P values: a = .05 b = .01 c = .001

design cannot offer much help here, for there is no possible determination of time order. As an heuristic strategy to compensate for the absence of time order, the relative importance of any predictor within each school year can be invoked as an indication of primary stimulus. The freshman year gives first priority to social factors; the sophomore year begins to show the interaction of social and psychological factors, with the combined social factors having the largest impact. After the sophomore year, self-identification emerges as the most powerful predictor of political and religious attitudes in both upper classes. The "impact" of college in these two years appears to be very small.

Implications for longitudinal analysis

This cross-sectional study obtained changes in order and magnitude of predictive importance for social and psychological factors in successive college years. Social factors (choices of environment) appear to be major impact variables in freshman-to-sophomore matriculation and to facilitate the development of appropriate self-labels. Maturation from freshman-to-senior increases the predictive role of self identification. That maturation can be conceptualized as the establishment and continuation of new information-seeking patterns in the choice of different environments (e.g., media, reference groups, etc.), both within and outside the college. College "impact," then, might comfortably fill the role of intervening variable in the establishment of consistency between social and psychological factors in the student's cognitive structure by means of exposure to different communication environments.

Such a proposed interaction of psychological and social variables to produce the impact of college represents an attempt to combine various theoretical positions advanced in earlier research. In the present view, college both enhances the psychological variables of maturation and reduces ambiguity in the social variables

of self-labeling that accompany the taking of social roles. This interaction between psychological and social variables leads to a paraphrase of Berelson's (1949, in Schramm, 1960) classic comment on the effects of communication:

> Some kinds of college with some kinds of characteristics have some kinds of impacts on some individuals at some points in time.

The exploration of different impacts implied here--what this paper will term a "kaleidoscope hypothesis"--forces the study of college impact into a framework that facilitates prediction of different patterns, rates and directions of impact as contingent variable relationships, a theoretical and methodological position with close affinity to the expectations regarding human behavior as dependent on situational constraints.

The college impact model

The logic supporting interrelationships of variables that will determine the impact of college on students depends heavily on the assumptions associated with the general area of consistency theory. The college system is the scene in which the interactive processes of maturation and self-labeling take place. Considered in terms of communication behaviors, the student as an actor in the college system can reconcile the maturational and labeling cognitions by selecting those college and/or non-college environments whose communication reinforces his self-image OR changing his self-image to meet the labeling communications of these environments.

The model proposed here is intended to specify the process of reconciliation between the student's internal self-image responses and the social or institutional emphases of his reference groups within the college communication system. To entertain this model, the seemingly contradictory goals of maintenance and change

of the larger social order will be invoked as a continuum to define the potential impact of a college education. For example, communication of skills and self-labeling are seen as contributing to culture maintenance, while the introduction of cultural alternatives and self-questioning contribute to cultural change. Oversimplified, some communication within the system will stress fixed outcomes while other communication will stress variable outcomes, these outcome types being broadly identified with cultural maintenance and change, respectively. These maintenance and change communications can also be reflected in the individual's self-image as a person who endorses the status quo or desires significant social modification for personal satisfaction.

The greatest opportunity for impact, then, comes from processes of reconciliation. A student who enters the system with accurately pre-conceived notions of his self-image and his college experience, and is exposed to communication that reinforces these preconceptions, by selection or accident, is likely to register less independent college impact than the student who has no idea what to expect or whose preconceptions are violated. The student who shows no impact (either by accentuation or change) is unlikely indeed, but the pattern, rate and direction of impact should be kaleidoscopic in nature, reflecting the interaction of communication variables in the system.

The variables in this model are seen to have the following sequence of effects. Predispositional factors affect the student's self-image and his value system. These predispositional factors also affect the selection of a particular school, a major, and (possibly) a new living environment. However, once these decisions are made with respect to the environment in which value systems may be maintained or altered, the reconciliation between the psychological and social factors--their mutual reinforcement--will determine the ultimate stability or change in the value system at the conclusion of the college experience. If the student selects an

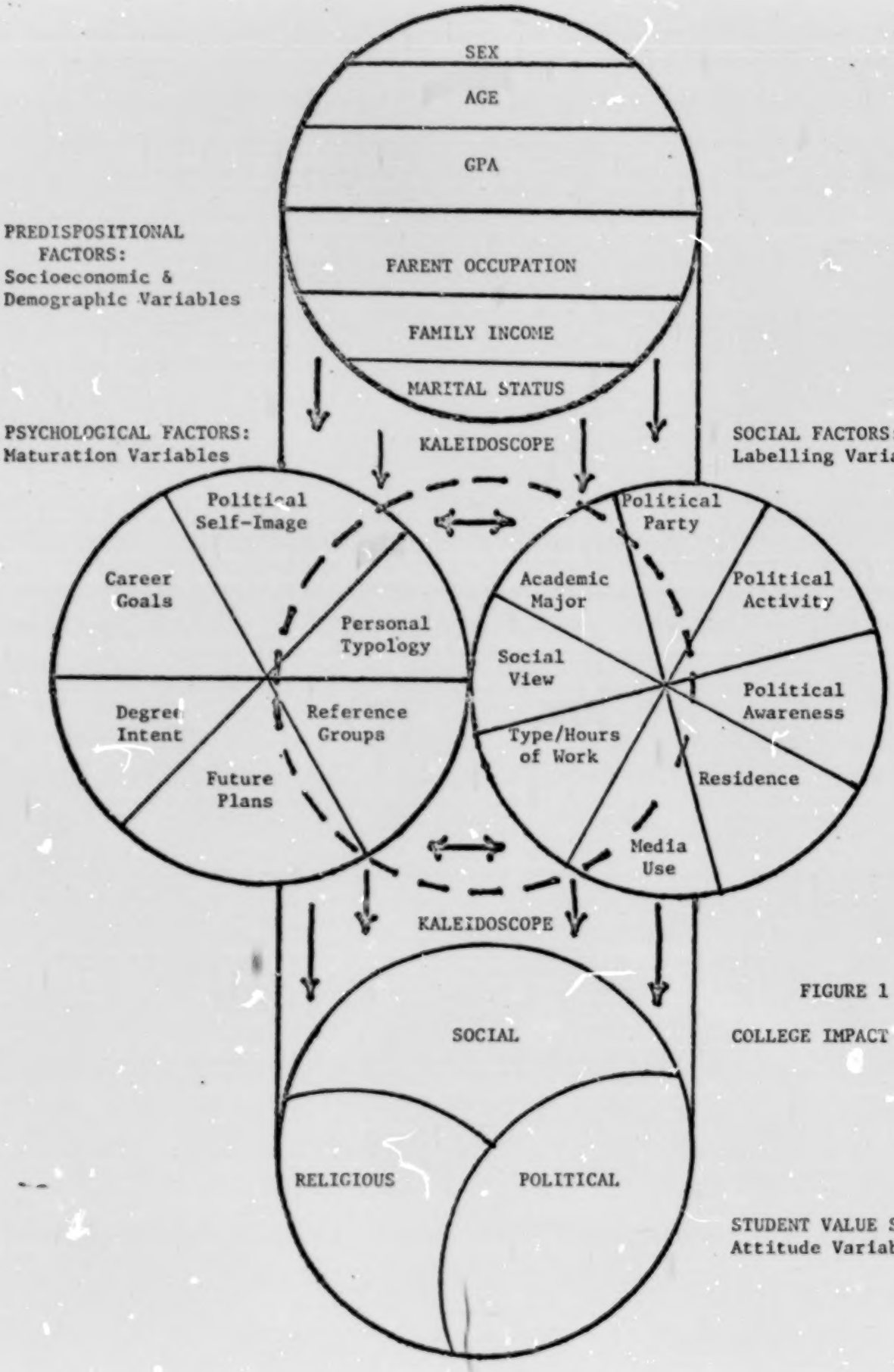

FIGURE 1

COLLEGE IMPACT MODEL

environment that is mainly compatible with his prevailing value set at the time of entry, then the communication system will encourage stability in that value set; if the student selects an environment that questions his value set but that environment has high salience for the student, then the communication system will encourage change in that value set.

This conceptualization emphasizes the interaction between psychological and social factors in the determination of values ostensibly attributable to a college education. However, it avoids the determinism implied by total dependence on the concept of self-selection or the single effect assumption inherent in much of the cross-sectional work on student attitudes. It requires observation over time, for freshman-to-senior effects are not seen as linear, and it requires the assessment of potential non-college contributions to stability or change in the values with which the student approaches the larger culture.

When this hypothetical process is put in the form of propositions, the following relationships should be testable:

1. a. The greater the consistency of predispositional factors (socioeconomic and demographic variables), the greater the correspondence between predispositional and psychological factors (maturational variables).

   b. The greater the consistency in predispositional factors (socioeconomic and demographic variables), the greater the correspondence between predispositional and social factors (labeling variables).

   c. The greater the correspondence between psychological factors (maturational variables) and social factors (labeling variables), the lesser the change in student value systems (attitude varialbes).

2. a. The lesser the correspondence between psychological factors (maturational variables) and social factors (labeling variables), and the greater the consistency of psychological factors (maturational variables),

   (1) the greater the change in social factors (labeling variables) and

   (2) the greater the impact of psychological factors (maturational variables) on student value systems (attitude variables).

   b. The lesser the correspondence between psychological factors (maturational variables) and social factors (labeling variables), and the greater the consistency of social facotrs (labeling variables),

   (1) the greater the change in psychological factors (maturational variables) and

   (2) the greater the impact of social factors (labeling variables) on student value systems (attitude variables).

3. The older the student, the greater the consistency in psychological factors (maturational variables).

The relationships between factors (variable sets) are operationally defined as follows:

Consistency is the inter-item correlation within a factor (variable set).

Correspondence [i.e., reconciliation] is the correlation between two or more factors (variable sets).

Impact is the amount of variance explained in student value systems (attitude variables) by a factor (part or all of that variable set).

The second set of propositions is the key to movement within the college system. Assuming initial social communication selections are made to maintain psychological stability, a poor reconciliation between social and psychological factors should carry drive value, motivating changes in social communication until consistency is restored.

Analysis strategies

Assuming appropriate operational definitions suggested in the college impact model, tests of propositions 2 and 3 can be conceptualized as a classic three-variable* regression analysis, with the prediction equation

$$A = b_{AP}P + b_{AS}S + e$$

where A = attitude
P = psychological factor
S = social factor
e = error

As proposition 2 states, the contributions of P and S are complementary, and will change over time in a direction that predicts the increasing contribution of P as the student matures. This contribution may be calculated from the cumulative impact of variables within factors by reference to the size of path coefficients.

Yet the general consistency form of proposition 1 requires some specification of the mechanisms by which attitude change takes place over the matriculation period. The relationship of consistency and correspondence to the amount of attitude change presents a more difficult analytical problem, for it stipulates the result of two sets of relationships, intra-factor and inter-factor. Working back from the amount of change as the criterion variable, comparisons of average inter-item correlations (consistency) and size of canonical correlation coefficients

*Since predisposing factors should be imbedded within psychological and social factors, their potential independent contribution to college impact should be accounted for by these more proximate factors; hence, the exclusion of these variables in prediction analyses should not reduce the generalizability of relationships supported by the three-variable model.

(correspondence) may be calculated. Such a comparative analysis would take this general form:

$$\frac{C_{yes}}{r_p r_s} < \frac{C_{no}}{r_p r_s}$$

$$R_{ps} < R_{ps}$$

where C = change in attitude scale score (by one SD, for example)
r_p = consistency within the psychological factor
r_s = consistency within the social factor
R_{ps} = correspondence between the psychological and social factors

Such a comparison could be extended to greater amounts of change, with accompanying hypotheses about the lesser magnitudes of both consistency and correspondence. However, greater sensitivity in these comparisons presupposes finer discriminability of attitude items which may not be present even though the scale being used has met internal validity criteria.

Finally, numerous bivariate relations can be computed between variables within factors by redefining the roles of predictor and criterion and by the use of techniques such as cross-lagged correlation to assist in the determination of time order for impact variables.

Limitations of the model

The propositions from the college impact model fulfill systems analysis criteria in their empahsis on multivariate interaction to produce differential effects. The focus on political and religious attitudes as the only potential outputs of intra-college and extra-college inputs, while consistent with the literature in this area, is a severly limited definition of impact. Many other possible impact indicators could be proposed. Obviously, some variables that are defined as predictors in the present model are just as easily conceptualized as criterion variables in another model.

Whatever the limitations of definition, however, when contrasted with the conventional statements of freshman-to-senior attitude change scores as evidence pertaining to the influence of college on students, the model developed in these pages represents a far more general theoretical framework for the study of college impact. The test of this model with the required longitudinal data offers greater understanding of college impact as a dynamic, interactive process.

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APPENDIX A-1

POLITICAL AND RELIGIOUS SCALE ITEMS IN PILOT STUDY

POLITICAL SCALE ITEMS

1. The right to private property is sacred.
2. Capital punishment should continue to be judged unconstitutional.
3. Every family should be guaranteed a minimum income.
4. Free enterprise is the best way to assure full employment.
5. More police and law enforcement is the best way to deal with crime.
6. Wealthy people should pay more taxes to help the poor.
7. There is too much lenience in the courts toward the criminal element in society.
8. In the national budget, social welfare programs should have higher priority than defense.

Liberal items = 2, 3, 6, 8
Conservative items = 1, 4, 5, 7
Items scored 1-6, conservative items reverse-scored for summation.
Alpha = .77

RELIGIOUS SCALE ITEMS*

1. God will support the right and condemn the wrong.
2. A person should follow his own conscience--not prayer--in deciding right and wrong.
3. A belief in God is merely another way of "explaining" things in terms of the unknown.
4. Belief in God makes life on earth worthwhile.
5. Instead of a religion, a person should have a philosophy of life.
6. There is a Divine plan and purpose for everything on the earth.
7. If you are a strong person, you do not need religion.
8. When in doubt, it is best to ask God what to do.

Traditional items = 1, 4, 6, 8
Philosophical items = 2, 3, 5, 7
Items scored 1-6, traditional items reverse-scored for summation.
Alpha = .93

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*In the questionnaire, items from the abbreviated Mach scale (Friedman, Gold and Christie, 1972) were mixed with the items in the religious scale for a total section on "personal values." The Mach items did not scale for the pilot sample; they were dropped in the longitudinal study.

APPENDIX A-2

OPERATIONAL DEFINITIONS OF PREDICTOR VARIABLES IN PILOT STUDY

Residence: Live in apartment or dorm = 1
Live at home (own or parent) = 0

Major: Arts/Humanities and Social Sciences = 1
Other Majors = 0

Degree: BA and/or Teaching Credential = 1
MA = 2
Higher Degree = 3

Political Self-Identification: How would you describe your general feelings toward politics?

Very liberal = 6 Slightly liberal = 4 Conservative = 2
Liberal = 5 Slightly conservative = 3 Very conservative = 1
0 = no answer (deleted from analysis)

Political Awareness: summative index of frequency response to three questions:

How often do you discuss politics with your family or friends?
How often do you read about politics in newspapers or magazines?
How often do you watch political news or commentary on TV?

Very often = 3 Sometimes = 2 Almost never = 1
(Possible score range = 0-9; obtained range 0-9)

Political Activity: summative index of participation in five activities

Have you ever done any of the following things in politics?
YES = 1 NO = 0

Talked to people to try to get them to vote for or against any candidate or issue?
Signed a petition?
Given money or bought tickets or anything to help any candidate or issue?
Carried a petition or participated in a sit-in or demonstration for any candidate or issue?
(Possible score range 0-5; obtained score range 0-5)
Scale did not meet Guttman criteria: coefficient or reproducibility < .90

Media Choice: Which of the following sources would be your FIRST choice for political commentary?

Chronicle/Mercury-News/TV/radio/Christian Science Monitor = 1
Time-Newsweek = 2
Sedition/Ramparts/Barb/El Chisme/Muhammed Speaks/KQED = 3

Major Influence: Who or what has been the single most important influence on the way you feel about life today?

Parent = 1 Spouse/Friend/Minister/Public figures = 2